





# THE MAP IS NOT THE TERRITORY

Rosenwald-Wolf Gallery  
Philadelphia College of Arts & Design  
Philadelphia, Pennsylvania

April 3 - May 8, 1992

CURATORS:

Frank Galuszka  
Nathan Knobler

DEVELOPED AND CREATED BY:

**ENTOURAGE:**Exhibitions  
Elkins Park, Pennsylvania

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## THE MAP IS NOT THE TERRITORY

by Frank Galuska

We say the map is different from the territory. But what is the territory?

Operationally, somebody went out with a retina or a measuring stick and made representations which were then put upon paper. What is on the paper map is a representation of what was in the retinal representation of the man who made the map; and as you push the question back, what you find is an infinite regress, an infinite series of maps. The territory never gets in at all. The territory is *Ding an sich* and you can't do anything with it. Always the process of representation will filter it out so that the mental world is only maps of maps of maps, ad infinitum. All "phenomena" are literally "appearances".

Or we can follow the chain forward. I receive various sorts of mappings which I call data or information. Upon receipt of these I act. But my actions, my muscular contractions, are transforms of differences in the input material. And I receive again data which are transforms of my actions. We get thus a picture of the mental world which has somehow jumped loose from our conventional picture of the physical world.

*Gregory Bateson, Form, Substance, and Difference*  
***Steps to An Ecology of Mind***

Maps are interpretive inventions. They suggest how we may operate effectively in knowledge. Any configuration of knowledge is a kind of map. Every map offers imaginary companionship in experiencing thought fictionalized as place.

Maps provide for discovery in a social context even though the mapmaker may be absent. Maps suggest conversation with someone who has gone before, as discovery in one person what has already been discovered in another. Because of the intervention of the mapping process Bateson describes, these discoveries are in fact inventions. Discovery is only discovered as mapped into invention.

The fresh feeling of discovery, the rush of newness, is invented as something that can be understood through the action of coordinating through explaining. The explanatory act replaces its source new feeling with portable description, something which can be stored and carried until it is again useful to some other understanding.

It is paradoxical that mapping requires a certain blindness, for it is only when the mapmaker is blinded to new experience by modelling a coded equivalent out of old experience, that a map is created.

As, in experience, something is always being coordinated with something else, mapping is always happening. Because maps that become artifacts are visible to others, they provide for shared experience, as each viewer becomes a participant that operates between a you and me as well as between a here and there.

Each artist or scientist in this exhibition is offering something of his or her mind as a place to be explored by and with another. The means of this exploration is a coordination of experiences, ideally an empathy of pasts.

Anne Hayes and Glenn Davidson are two Welsh artists who build internally accessible sculptures and environments that stimulate spontaneous experiences as the perceptions of each experiencer are altered. As well as being exhibited in traditional artworld venues, their work has been shown at communication and cybernetics conferences. Their work *Locomotion* has travelled through primary and secondary schools in Britain. They take as subjects common but elegant forms: a croissant, a teapot, a pinecone. These are translated via a computer program developed by this couple in collaboration with scientists at the University of Amsterdam into sculpture-visualizations that coordinate with template translations. The templates are drawn onto paper by a radio controlled robot (originally dubbed *Harc* from an acronym, but, because of its slow pace, renamed *Tortoise*). The superstrong paper, designed for underwater use by diver-designers, is taped with paper tape and gently inflated, so that each sculpture can be admired and experienced both from without and within. The work in this show documents their recent spiny structure *Pine*.

(Art)<sup>n</sup> **Laboratory** was founded in 1983 by Ellen Sandor. It is a collaboration of artists and scientists working together in the Chicago area, and includes mathematician/computer scientist Stephan Myers and the co-directors of The Electronic Visualization Laboratory, artist and professor Dan Sandin and Professor of Electrical Engineering and Computer Science, Thomas DeFanti. Their works, called **PHSColograms**, create three dimensional stereoscopic effects by sandwiching as many as 13 images composed of 8000 vertical lines into a structure that appeals separately to each of the viewer's eyes. The images they choose may or may not be connected to recognizable experiential imagery. *Fractal Forest* looks as if Maxfield Parrish is being rediscovered with chaos theory in mind, *Spacetime Visualization* is a suggestion as to how a viewer might consider something on the outer edge of understandability.

Painter Charles Schmidt, a professor at Tyler School of Art, is also a NASA artist; one of the select few American artists entrusted with the task of translating such things as shuttle launches, orbiting laboratories, and space suits into art. He paints portraits of astronauts too; especially noteworthy is his memorial portrait of the Challenger astronauts installed in the Capitol Building in Washington. Professor Schmidt's interest in space and in the tile mapping systems of probes and landers, such as Surveyor and Viking, preceded these commissions. The large drawing in this show, purchased by Rutgers U in the 1970's, shows an extraterrestrial landscape, drawn to explore the wonder of today's scientific realities. He has said about this work: "This drawing is not a landscape with a mathematical order imposed upon it; rather it is a panoramic map of mathematically constructed events which combine to make a landscape. The positions of objects on the 'map' were determined by their relationships to a concentric grid, and their locations can be expressed in coordinate form."

Kenneth Snelson has been known for decades for his tension supported sculptures. Less known are his images of atomic visualizations. Mr. Snelson not only brings aesthetics and wit to this enterprise, but deep and questioning scientific curiosity. Snelson's atom is wholly different from the "solar" models with electrons orbiting around a central sunlike core of a nucleus. His model, assigning greater significance to magnetic force, shows atomic shells sustained by polarities in motion. He has devised these as delicate and vulnerable magnetically supported sculptures, and later as stereoscopic computer generated "photographs". His astonishing recent visualizations convey unforgettable aesthetic authority as "features of my picture come close to those we should expect of an atom in order to see it as a workable device capable of doing all those remarkable things an atom is able to do. It must give off and receive light like a tiny space station. It can remain stable and resist collapse under great pressure. It collects and organizes its electrons in shells around the nucleus. It puts to use all of its electrical, dynamic and magnetic forces in its structure. It can attach itself to other atoms in molecules and crystals with astounding virtuosity. And though its electrons are in rapid and perpetual motion, it can sit in tranquility in a rock for eternity."

Painter Anne Seidman developed the animation *The Blue Chair* on Unix based equipment with a research group including Susan Amkraut at Ohio State University in 1986. With this group, "specific software was written to model boulder-like objects by writing a solid texture map based on a 3D lattice. Points were mapped to lattice intersections". In the course of this two minute animation, which took about a year to produce, "3D objects collide and simultaneously become 2D." Seidman directs the computer center at Moore College of Art. Trained as a painter at the Pennsylvania Academy, she did graduate work at Ohio State where she began to bring her painterly sensibilities into the world of algorithmic program building. She never abandoned painting and drawing, and never let the intrinsic qualities of painting and drawing be taken over by "computer imagery". Along with *THE BLUE CHAIR*, an animation, she shows a painting and a plotter drawing. These three pieces show divergent media connected through a single aesthetic sensibility.

Clinton N and Thomas Woolsey show scientific brain mapping that reveals aesthetics both in the process and the outcome of this mapping. The elder Woolsey typically examines cortical responses to tactile stimulation. Responsible for the famous image of a distorted resident "homunculus" in the rat brain, he shows there and elsewhere, with imagination in communicating this information with accuracy, which parts of the brain control which parts of the body. Thomas Woolsey notably mapped configurations of brain cells that correspond to configurations of whiskers in the mouse's somatosensory cortex. Irving Geis, as a scientific illustrator, has, since the 1940's worked to invent ways of seeing what could not be seen, but could be understood. He translates understandings of microplaces into tangible maps using X ray crystallography to coordinate the atoms of such complex molecules as *Cytochrome C* in space. Thus, in his work, when we encounter a molecule we encounter a system of tubes and colored globes that serve to explain, how the thing works, in a language that relates to our apprehension of familiar objects in space of more familiar scale.

Alex Grey also paints what cannot be seen. He usually represents humans as transparent beings wherein biological and spiritual systems meet and blend. He sees people more or less as Stanislaw Grof sees them, as places where an infinity of consciousness intersects with a "Newtonian body". In *Universal Mind Lattice* Grey recollects and represents the site of this meeting, as disclosed by psychedelic experience. Allyson Grey's *Jeweled Web of Indra* accounts for her similar, if not identical, experience. The infinitely spreading, radiant pattern is another effort to fix her encounter with the new through a means that describes, respects, and even worships such experience. *Universal Mind Lattice* and *Jeweled Web of Indra* comprise a double description of something ineffable yet shared. Allyson Grey's other pieces, *Square Root* and *Chaos* translate mathematical processes into places, one coherent and compelling, the other, remote, hostile, filled with threatening allure.

For Sharon Horvath painting and thinking lose their boundaries. They become not interchangeable, but bonded into one act which focuses such bright light on the moment of creation that miracles seem possible. These are miracles of inspiration: appearances of endless possibilities meet the wherewithal to bring them into being. She says, "I imagine a painter as someone excavating a whole city, and building that city at the same time, someone digging in the ground and hovering far above, seeing a pattern." The painting becomes the place she is discovering. While there are often references to a world outside the painting, even a geological or archeological world, these images appeal directly to the imagination. Her paintings are ultimately mysterious maps of themselves.

Agnes Denes has been the premier artworld mapmaker for over twenty years. In her drawings, prints, books, sculptures, and site specific works, she has remade the world over and over, according to her concepts. She has not only scrupulously remapped the globe onto such unexpected forms as donuts, ovoids, and hot dogs, she has given these remappings dignity and ecological urgency. Beyond the planet, she has looked outward and inward: from the apprehension of interstellar distance in her book *Dust* to the structural possibilities of human argument in *Dialectic Triangulation: A Visual Philosophy*. She has even described human life as a place, as something akin to an architectural interior and has extended Pascal's triangle until its slopes curved to nearly horizontal points.

Ellen Bloomenstein packages worlds under shrinkwrap. Her worlds are also personalities, or possibilities for personalities as "identity is dictated through collective voice and image in media, and throughout history." In each densely packed domain she casually and slyly repackages articles from our prewrapped environment until it seems as if people's minds could be read and entered, as if friends and strangers had gone transparent or had become available for psychic interview. The viewer enters cramped three dimensional spaces, crowded brains where symbols of life lived in consumer culture abound in a babel of supply and demand.

The worlds that Bloomenstein maps are at once wittily familiar and chillingly dangerous. *The Pink Piece* embodies the choking feeling that pervades life among insistent and trivial new products. These densely packed objects seem to have been intercepted on a pilgrimage to a landfill, to one of the mass graves of mass culture.



David Kettner has invited his two year old daughter to place red dots randomly on, among other things, a reproduction of a painting by Piero della Francesca. He then “finds” the *Secret Geometry* of the relation of the random dots to the Piero. Of *Secret Geometry: Piero and Emily* (1991) Kettner says, “The arrangement of these stickers points to an architectural and symbolic truth in Piero’s rectangle which I could not locate on my own, notably the construction of the six pointed star - the star of David.” This process is so successful that it calls all diagnostic compositional analyses into question. It asks how delusional are critics and art historians; and how dependent is art on such delusion for its success? Kettner pursues this process with passionate faith until he discovers not only a geometric *raison d’être* but a profound insight, an epiphany. This work is one of relentless significance mapping, of insisting that chaos yield to order. Kettner’s quest is paradoxically artificial and sincere. Its sincerity presses past the artifice to a change in consciousness that inevitably surpasses the project as it opens up a spirit of coherence in the artist that communicates through the work. It is the spirit of coherence in the artist and the viewer, and not some external criterion that, in the end, makes metaphors fit.

Painter David Pease, always interested in the mechanics and strategies of games, knows that nowhere is the imagined game more vivid than when competitors focus their attention in the imaginary locale of the gameboard. Swarming possibilities as controlled by the grid of the chessboard exemplifies the possibilities of such charged and magic space. Chess is like a machine of consciousness dimensionalized into being by dancing antipathy. *Risk* provides a chillingly literal world for conquest. And other gamespaces can have rhythms of anticipation and foreboding (*Monopoly*), mutual filtering (*Chinese Checkers*), and whimsical sidetracks (*Candy Land*). Each constitutes a different place, one not so much imagined as *experienced as real*, as substituted for the natural environment, while the game is played. These places dissolve as the game concludes, as the board is folded and the pieces slide down its trough and into the box. Pease’s hermetic paintings never close, and the game that goes on is unique to the place: witty, recursive, and intangible.

Bob Keyser’s paintings are even more intangible: the landmarks are all disguised, while the sense of being a special somewhere, perhaps in abstract folklore, remains intact. Rackstraw Downes’ paintings may seem the opposite of Keyser’s - concrete, recognizable, down to earth. But his habit of buying lines known to be straight, his effort to show things as they look to the observer, calls attention to that observer as the site within which the landscape or scene is being constructed. Neither Keyser nor Downes is naively mapping the world he sees, each is coordinating, by painting, the world he perceives and his further perception of himself seeing it. Paintings are places where worlds outside and worlds inside, meet. As artifacts that reflect thought, paintings are, themselves, examples of that meeting.

John Moore is a Caneletto for the twentieth century. His paintings record specific vistas, samples of our environment. His inclusive vision does not edit out the trivial. He insists on ordering it as rigorously as he orders what is consensually meaningful. He simultaneously regards entities as individuated and unique, and as seamlessly connected in the fabric of the visible world. In this way, his paintings imbue encroachments and detritus with both natural obviousness and guerilla significance. Unlike photorealists, who melt distinctions away by applying an unprejudiced eye, Moore applies intense ordering criticism to all he sees. He has recorded his own thought as densely, secretly, invisibly active in the world of ordinary objects and events.

This exhibit takes coordination as its subject and its structure. Rather than attempting a survey, it searches out a variety of approaches and arrays them. Each curator, in fact, searched out a variety independently. By joining these varieties, *The Map Is Not The Territory* is dimensionalized as it coordinates intersecting arrays into an imaginary and mutable solid.

Frank Galuszka

Thanks to the artists, collectors, and galleries who have lent works to *The Map Is Not The Territory*. Special thanks to Bette and John Woolsey for their help in identifying and securing some of the work in this exhibition.

## THE MAP IS NOT THE TERRITORY

by Nathan Knobler

Our senses provide us with information about temporal experiences that exist in space, are revealed in light or shrouded in shadow. These perceptions and our personal knowledge of our thoughts, feelings, memories and dreams are available to others only when we can construct equivalents for them that bridge the space between one consciousness and another.

Each perception of a multi-dimensional experience provides an observer with more information than can be represented in a single two dimensional image. Whether directly observed or conceptualized, spatial relationships, light and the appearance of reflecting forms, surfaces and colors and the temporal dimensions of an experience cannot be reduced to a flat equivalent and still remain unchanged. Even the photograph, which has become the standard against which many measure the accuracy of representation, must be acknowledged as an impoverished image, when the information it conveys is compared with the information available in the perception of the subject that was "reproduced" on the surface of the print.

Every two dimensional image is a transformation. The mark-making materials used by a visual artist become invisible to all but the most sophisticated viewer when they are transformed into symbols, signs and systems; the colors and two dimensional shapes transformed into the equivalents for spaces, surfaces, light and form.

Of necessity, photographs, diagrams, pages of type, paintings, sculpture are all transformations. They are the result of processes that record, compress, select, evaluate, revise, personalize the experience of the image-maker for transmission to others.

Maps are special forms of transformation. They provide information about the spaces we live in or the spaces we can imagine. A map can tell us where we are or how we can get to where we want to be. It can tell us about the movement of others who have travelled routes we know and routes we might wish to follow. There are those for whom a map is a utilitarian device, providing the kind of information that is clear, practical and efficient. There are others who reach for a map in anticipation of adventure, hoping to chart routes that offer challenges and serendipitous pleasures. And finally there are those for whom a map is a silent echo of adventures past.

All maps are incomplete representations of the topography they define. Each is limited by its scale, by the kind and amount of information that is encoded, by the medium used to produce the image, and by the system of representation that the cartographer adopts to organize the data into a communicable form.

Many artists are, in fact, cartographers. They are fascinated with images of space: with spaces they have experienced and wish to recreate; with spaces that challenge a viewer's orientation; with spaces that have the power to evoke, in others, remembered times and places, and the feelings associated with those memories.

Some of these graphic illusionists use traditional spatial systems like linear perspective, opening a window through the frame. Others produce spatial anomalies in which a form of cinematic discontinuity shifts a viewer's perception from one spatial framework to another. Unlike their colleagues who use images for narration or for the presentation of personal or political polemics the artist-cartographers create spaces which memory or imagination can fill.

*The Map Is Not The Territory* is an exhibition that joins artists whose images are so disparate that they might not be thought to represent common interests. Frank Galuszka and I have shared in their selection knowing that each of us would bring to our task a somewhat different perspective. Among the artists I have invited Mark Innerst, Racksiraw Downes, John Moore, Michael Rossman and Wayne Thiebaud, each, in his own way, extends the traditions of representational painting and drawing into the later part of the twentieth century. Beginning with their perceptions of the environment they observe, these artists translate those observations into commentaries that invite us to reorient our perceptions.

The spatial mazes constructed by Cheryl Goldsleger and filmed by Peter Rose are baroque complexes in which we play a form of psychological game, uncertain of where we are or where we will find ourselves at the end of a disorienting journey. Each offers an adventure that begins with the artist's "map" and ends with discoveries of our own making.

Peter Hutchinson constructs provocative, compressed landscapes which he then photographs. Douglas Heubler traces connections on maps of journeys he conceives. Physical and mental spaces are transformed; in each instance three dimensional reality and two dimensional are interleaved. Which is the essential act? Where does the meaning in these works reside? In the concept? In the actual forms and spaces represented. In the physical form that their representation takes on the wall of a gallery?

As is the case with all artists, the works of Robert Keyser, David Pease and Gordon Matta-Clark are rooted in their experience in a three-dimensional world. But the representation of that world, as evidence of their perceptions, or as a provocation or stimulus to their viewers, is not their primary concern. Theirs are images divorced from immediate connections with perceived external references. If there are liaisons to be made between the canvas or the paper and the forms, spaces and light outside the walls of the studio those connections are to be inferred or invented by each person who seeks to move through the frame in search of his or her own destination.

Each of these artists, and those invited by my colleague, has charted a vision of spaces that can be traversed by imaginative explorers. The journey begins with the map, but the map is not the territory, for the adventure that awaits the traveler depends, as always, on that which is discovered enroute.

Nathan Knobler

## CHECKLIST

All dimensions are in inches

### (Art)<sup>n</sup>

*AZT Total Electron Density*

1991

PHSCologram; Stealth negative (edition of five)  
24 x 20

Courtesy of the Artists and Feature, New York

*"ddl - HOMO"*

1991

PHSCologram; Stealth negative (edition of five)  
24 x 20

Courtesy of the Artists and Feature, New York

### Ellen Bloomenstein

*Pink Piece*

1991/1992

Mixed media, Vinyl, plastic, wood, purchased  
objects

75 x 82, 23 individual pieces

Collection of the Artist

*Isometric Systems in Isotropic Space - Map*

*Projections: The Cube*

1979

Ink and gouache on rag paper and mylar

30 x 24

Collection of the Artist

### Agnes Denes

*Dialectic Triangulation: a visual philosophy*

1969/1981

Four color lithograph with metallic dusting  
(1/1, T.P.)

35 1/2 x 25

Collection of the Artist

### Rackstraw Downes

*Approach to Holland Tunnel with 75 Varick*

1989

Oil on canvas

35 1/4 x 60 1/4

Collection of the Artist,

Courtesy of Hirschl and Adler Modern

### Irving Geis

*HorseHeart Cytochrome C*

1972

Marker, pencil and watercolor on paper

Approximately 36 inches square

Collection of Donald and Judy Voet

### Cheryl Goldsleger

*Projection: Location (Study)*

1985

Oil, wax, pigment on linen

30 x 38

Collection of the Artist

### Alex Grey

*Universal Mind Lattice*

1981

Acrylic on linen,

Frame - fiberglass, resin and paint

60 x 126

Collection of the Artist

### Allyson Grey

*Jewel Net of Indra*

1988

Oil on wood

40 x 40

Collection of the Artist

*Chaos*

1988

Oil on wood

40 x 40

Collection of the Artist

**Anne Hayes/Glenn Davidson**

*Spinica*

1991

Laser Print

20 x 28

Collection of the Artists

*Jelloid*

1991

Laser Print - Double/Image

20 x 28

Collection of the Artists

*Hothouse*

1991

Laser Print - Multi/Image

28 x 33

Collection of the Artists

**Douglas Heubler**

Variable Piece #8

1970

Photographs, text, mixed media

Diptych: Left 25 x 45 3/4; Right 25 x 38 3/4

Courtesy of Holly Solomon Gallery

**Peter Hutchinson**

*Long Point Project*

1969

Photographs and text on mat-board

23 3/4 x 22 1/2

Courtesy of Holly Solomon Gallery

*Landscape with Thrown Rope of Mold and Rover  
Rocks*

1991

Photographs and text on mat-board

23 3/4 x 22 1/2

Courtesy of Holly Solomon.

**Sharon Horvath**

*Babel*

1991

Oil on Canvas

11 x 8

Courtesy of Victoria Munroe, New York and  
Jessica Berwind, Philadelphia

*Invisible City*

1991

Oil on panel

13 x 13

Courtesy of Victoria Munroe, New York and  
Jessica Berwind, Philadelphia

*Netherlands*

1989

Oil on canvas

21 1/4 x 21 1/2

Courtesy of Victoria Munroe, New York and  
Jessica Berwind, Philadelphia

**Marc Innerst**

*Buildings, Sea, Sky*

15 1/4 x 13 1/2

Courtesy of Curt Marcus Gallery

*Untitled*

29 1/2 x 23 1/2

Courtesy of Curt Marcus Gallery

**David Kettner**

*SECRET GEOMETRY: Piero and Emily*

1991

Gold and red ink, graphite pencil on tracing  
paper, acetate, photocopy

17 1/2 x 23 3/4

Collection of Steve Berg

*SECRET GEOMETRY: Red Stickers*

1991 - 1992

Red Stickers, graphite pencil, ink, tracing  
paper, acetate

18 3/4 x 32 3/4

Collection of Steve Berg

**Robert Keyser**

*It's only an accident, but I never make mistakes*  
1990

Oil on canvas  
30 x 45  
Courtesy of Dolan-Maxwell Gallery

**Gordon Matta-Clark**

*Untitled*  
1972-73  
Pencil/marker/colored marker on paper  
11 1/2 x 17

*Untitled (Trees)*  
1972-73  
Marker, pencil on paper  
14 x 17

**John Moore**

*Parking Garage*  
1989  
Oil on canvas  
34 x 64  
Courtesy of Hirschl and Adler Modern

**David Pease**

*Tortola I*  
1991  
Mixed media on paper  
37 x 40  
Collection of the Artist

**Peter Rose**

*Siren*  
1989  
Video - 13 minutes  
Collection of the Artist

**Michael Rossman**

*Fall Back*  
1990  
Graphite on Arches Buff  
34 x 48  
Courtesy of Moore Gallery

**Charles Schmidt**

*Mechanical Landscape*  
1975  
Graphite on K & E Paragon  
54 1/4 x 86 1/2  
Collection of Rutgers University,  
Camden, New Jersey

**Anne Seidman**

*Blue Chair*  
1986  
3-D Computer Animation - Two minutes  
Copyright Anne Seidman

*Untitled*  
1991  
Water media on rag  
26 x 34  
Courtesy of Larry Becker Gallery

*Physical Systems*  
1991  
Pen plotter, water media, rag  
26 x 34  
Courtesy of Larry Becker Gallery, Philadelphia

**Kenneth Snelson**

*Atoms at an Exhibition*  
1988  
Computer generated image (C-Print)  
22 x 26

*Auxiliary Orbits*  
1988  
Computer generated image (C-Print)  
22 x 26  
Collection of the Artist

**Wayne Thiebaud**

*Steep Street - Black and Gray*  
1989  
Spitbite aquatint etching and drypoint  
38 3/4 x 30 1/2  
Courtesy of Crown Point Press

### **Thomas A. Woolsey**

#### *Mouse Vibrissal Map*

1968 - 1969

Silver gelatin photograph

10 1/2 x 13 3/4

Collection of the Artist

#### *Cortical Barrel Fields in Mouse*

1968 -1969

Silver gelatin photograph montage, chart tape,  
pattern film, adhesive

23 1/4 x 29 1/4 (irregular)

Collection of the Artist

### **Clinton N. Woolsey**

#### *Figurine maps:*

Silver-gelatin photographs, adhesive backed  
chart films and ink on illustration board.

All 28 x 40 1/2 unless specified.

1. Chimp 51-76 Motor F; 1951
2. Chimp 51-76 Precentral sensory G; 1951
3. Chimp 60-51 C; 1960
4. Chimp 52-31 B; 1952
5. Chimp 53-31 F; 1953
6. Chimp 60-51 B; 1960
7. Chimp 60-51 E; 1960
8. Chimp 51-76 Sensory H; 1951
9. Chimp 67-288, Motor Cortex (left) 1967  
30 x 40 1/2
10. Rat, Motor Cortex 1951 20 x 28
11. Auditory and visual cortex maps, Guinea  
pig: oscilloscope records on black board,  
probably early 1950's, 20 x 28 1/4
12. Chimp homunculus diagram, sensory and  
motor cortex, ink on paper mounted on  
illustration board, probably early 1950's,  
28 x 40 1/2
13. Rat homunculus diagram, pencil on paper,  
probably early 1950's, 8 1/2 x 13 1/4

Collection of the Department of

Neurophysiology,

Waisman Mental Retardation Center,

University of Wisconsin, Madison









